

## Claims

1. Method for detecting multiuser behavior on the aerial interface in GPRS and EGPRS mobile radio systems,  
characterized in  
that during a transmission of subscriber data on the aerial interface, additional information contained in the subscriber data are acquired and evaluated by a device on the network side and/or the subscriber side, both in the uplink and the downlink.
2. Method according to claim 1, characterized in that at the beginning of the Temporary Bit Flow (TBF) the number of the used Radio Link Control (RLC) blocks are compared with the actually available and hence usable number of RLC blocks, and the number of parallel subscribers in the used timeslots is identified based on the additional information contained in the RLC blocks.
3. Method according to one of the preceding claims, characterized in that the parameters Uplink Status Flag (USF) and/or Temporary Flow Identifier (TFI) are evaluated as additional information.
4. Method according to one of the preceding claims, characterized in that it is determined for the duration of an uplink TBF, how many USF's are allocated by the network side.
5. Method according to one of the preceding claims, characterized in that it is determined for the duration of a downlink TBF, how many USF's are allocated by the network side.
6. Method according to one of the preceding claims, characterized in that the USF's and/or TFI's are identified, on one hand, for each TBF and, on the other hand, also for a combination of all TBF's which are part of the transfer.
7. Method according to one of the preceding claims, characterized in that in a static allocation process, the usage of the timeslots for the RLC blocks is determined by counting the data frames.

8. Method according to one of the preceding claims, characterized in that for the entire lifetime of the respective uplink TBF and/or downlink TBF, the RLC data as well as the RLC/MAC control blocks are evaluated for all TBF's in existence at that time and in all timeslots allocated to the respective TBF, and that it is determined based on these data if a multiuser operation has occurred at the time of the data transmission.

9. Device for carrying out the method according to one of the claims 1 to 8, characterized in that devices for acquiring additional information are provided on the network side and/or on the subscriber side in the mobile radio network, which information is included in the subscriber data transmitted on the aerial interface in the downlink and uplink.

10. Device according to claim 9, characterized in that the devices are provided in the Packet Control Unit PCU (8).

11. Device according to claim 9 or 10, characterized in that the devices comprise a subscriber-side measurement system, which cooperates with or is integrated in a mobile radio terminal.

12. Device according to claims 9 to 11, characterized in that the additional information comprises the parameters USF and/or TFI.